

CLAIMS

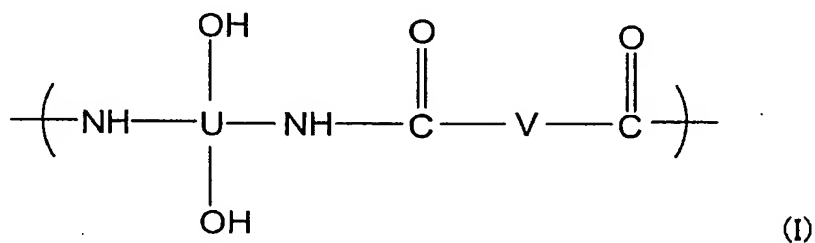
1. A positive photosensitive resin composition comprising:

- 5 (a) alkaline aqueous solution-soluble polyamide having a polyoxazole precursor structure;
(b) an o-quinonediazide compound; and
(c) a latent acid generator which generates acid upon heating.

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2. The positive photosensitive resin composition according to claim 1, wherein the component (a) is a polyamide having a repeating unit represented by the following general formula (I):

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wherein U represents a tetravalent organic group, and V represents a divalent organic group.

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3. The positive photosensitive resin composition according to claim 1 or 2, wherein the component (c) is a salt formed of a strong acid and a base.

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4. The positive photosensitive resin composition according to any one of claims 1 to 3, wherein the component (c) has a decomposition starting temperature of 140 to 250°C.

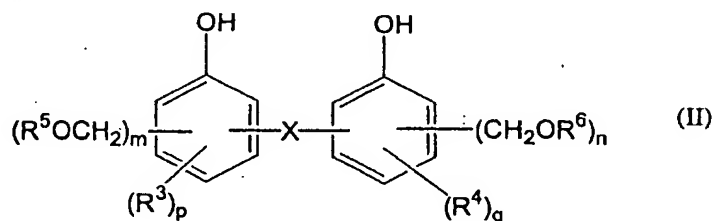
5. The positive photosensitive resin composition according to any one of claims 1 to 4, wherein the component (c) is a salt of toluenesulfonic acid.

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6. The positive photosensitive resin composition according to any one of claims 1 to 5, wherein the component (c) is an iodonium salt.

10 7. The positive photosensitive resin composition according to any one of claims 1 to 6, further comprising (d) a compound having a phenolic hydroxyl group.

8. The positive photosensitive resin composition according to claim 7, wherein the component (d) is a compound represented by the following general formula (II):

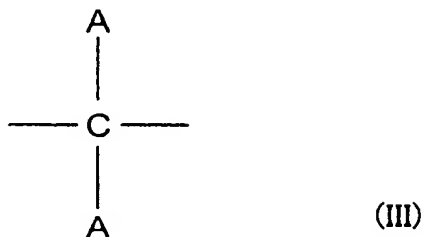


20 wherein X represents a single bond or a divalent organic group, each of R^3 to R^6 independently represents a hydrogen atom or a monovalent organic group, each of m and n is independently an integer of 1 to 3, and each of p and q is independently an integer of 0 to 4.

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9. The positive photosensitive resin composition according to claim 8, wherein the group represented by X in the general formula (II) is a group represented by the

following general formula (III):



5 wherein each of two A's independently represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, and optionally has any one of an oxygen atom and a fluorine atom or both.

10 10. The positive photosensitive resin composition according to any one of claims 1 to 9, wherein the content of the component (b) and the content of the component (c) are 5 to 100 parts by weight and 0.1 to 30 parts by weight, respectively, relative to 100 parts by weight of the
15 component (a).

11. The positive photosensitive resin composition according to any one of claims 7 to 10, wherein the content of the component (b), the content of the component (c), and
20 the content of the component (d) are 5 to 100 parts by weight, 0.1 to 30 parts by weight, and 1 to 30 parts by weight, respectively, relative to 100 parts by weight of the component (a).

25 12. A method for forming a pattern comprising the steps of:

applying the positive photosensitive resin composition according to any one of claims 1 to 11 onto a supporting

substrate and drying the composition to obtain a photosensitive resin film;

exposing the photosensitive resin film to a ray of active light having a predetermined pattern; and

5 developing the exposed photosensitive resin film using an alkaline aqueous solution.

13. The method according to claim 12, further comprising a step of subjecting the developed photosensitive resin film
10 to a heating treatment.

14. The method according to claim 13, wherein the heating treatment is a treatment of irradiating the film with a pulse of microwave while changing the frequency thereof.

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15. The method according to claim 13 or 14, wherein the heating treatment is conducted at a temperature equal to or lower than 280°C.

20 16. An electronic part comprising an electronic device having a layer of pattern obtained by the method for forming a pattern according to any one of claims 12 to 15,

 wherein the device comprises the layer of pattern provided therein as any one of an interlayer insulating
25 layer and a surface protecting film layer or both.

17. The electronic part according to claim 16 which is MRAM.